

What is claimed is:

1. A compound 8 to 50 nucleobases in length targeted to a nucleic acid molecule encoding microsomal triglyceride transfer protein, wherein said compound specifically hybridizes with and inhibits the expression of a nucleic acid molecule encoding microsomal triglyceride transfer protein.

2. The compound of claim 1 which is an antisense oligonucleotide.

3. The compound of claim 2 wherein the antisense oligonucleotide has a sequence comprising SEQ ID NO: 17, 18, 19, 20, 22, 23, 32, 33, 47, 48, 49, 50, 51, 52, 53, 54, 57, 58, 59, 70, 71, 72, 73, 74, 77, 78, 79, 81, 82, 85, 88, 89, 91, 92, 93, 94, 95, 96, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137.

4. The compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified internucleoside linkage.

5. The compound of claim 4 wherein the modified internucleoside linkage is a phosphorothioate linkage.

6. The compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified sugar moiety.

7. The compound of claim 6 wherein the modified sugar moiety is a 2'-O-methoxyethyl sugar moiety.

8. The compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified nucleobase.

5 9. The compound of claim 8 wherein the modified nucleobase is a 5-methylcytosine.

10 10. The compound of claim 2 wherein the antisense oligonucleotide is a chimeric oligonucleotide.

11. A compound 8 to 50 nucleobases in length which specifically hybridizes with at least an 8-nucleobase portion of an active site on a nucleic acid molecule encoding microsomal triglyceride transfer protein.

15 12. A composition comprising the compound of claim 1 and a pharmaceutically acceptable carrier or diluent.

20 13. The composition of claim 12 further comprising a colloidal dispersion system.

14. The composition of claim 12 wherein the compound is an antisense oligonucleotide.

25 15. A method of inhibiting the expression of microsomal triglyceride transfer protein in cells or tissues comprising contacting said cells or tissues with the compound of claim 1 so that expression of microsomal triglyceride transfer protein is inhibited.

30 16. A method of treating an animal having a disease or condition associated with microsomal triglyceride transfer

protein comprising administering to said animal a therapeutically or prophylactically effective amount of the compound of claim 1 so that expression of microsomal triglyceride transfer protein is inhibited.

5

17. The method of claim 16 wherein the condition involves abnormal lipid metabolism.

18. The method of claim 16 wherein the condition  
10 involves abnormal cholesterol metabolism.

19. The method of claim 16 wherein the condition is atherosclerosis.

15 20. The method of claim 16 wherein the disease is cardiovascular disease.